

Field Manual
No. 3-09.21

Headquarters
Department of the Army
Washington, DC, 22 March 2001

Tactics, Techniques and Procedures for THE FIELD ARTILLERY BATTALION

Contents

	Page
PREFACE	viii
Chapter 1 TASKS AND RESPONSIBILITIES	1-1
Section I –Tasks and FA Organization for Combat	1-1
Tasks	1-1
FA Organization for Combat	1-1
Section II – Responsibilities of Key Personnel	1-9
Command Section	1-9
Battalion Operations Section	1-16
Battalion Intelligence Section.....	1-17
Battalion Fire Direction Center.....	1-18
Battalion Ammunition Officer	1-19
Fire Support Elements	1-19
Liaison Officer	1-19
Radar Section Leader	1-21

Distribution Restriction: Approved for public release. Distribution is unlimited.

*This publication supersedes FM 6-20-1, 25 November 1990.

Chapter 2	COMMAND POST OPERATIONS.....	2-1
	Section I – The FA Battalion Command Post	2-1
	CP Composition.....	2-2
	Section II – TOC Organization.....	2-5
	TOC Organization.....	2-5
	TOC Battle Staff Organization.....	2-7
	Section III – TOC Configurations	2-9
	Towed Cannon Battalion TOC Layout (Example).....	2-9
	SP Cannon Battalion TOC Layout (Example)	2-10
	MLRS Battalion TOC Layout (Example)	2-11
	TOC Equipment.....	2-11
	Section IV – TOC Information Management	2-12
	Management of Tactical Information	2-12
	Information Management Tools.....	2-14
	Section V – CP Positioning and Movement.....	2-19
	CP Positioning Considerations.....	2-19
	Jump TOC Considerations	2-20
	CP Movement Techniques	2-21
	Section VI – Liaison Operations	2-23
	Liaison Organization.....	2-23
	Responsibilities.....	2-24
	Example LNO Checklist	2-26
	Example Outline of a LNO's Handbook/TSOP.....	2-28
Chapter 3	COMMAND and CONTROL	3-1
	Section I – General Communications Information.....	3-1
	Communications Responsibilities.....	3-4
	Battalion S6 Section Responsibilities	3-5
	Planning Considerations	3-6
	Section II – Command and Control Systems.....	3-9
	Army Battle Command Systems	3-9
	FA Tactical Data Systems	3-9
	Automation Considerations	3-10
	Section III – Radio Communications Systems	3-12
	Combat Net Radios	3-12
	FA Battalion Radio Nets	3-13
	Direct Support Mission	3-20
	Reinforcing Mission	3-22
	General Support Reinforcing Mission.....	3-23

General Support Mission	3-24
Chapter 4 THE FIELD ARTILLERY BATTALION PLANNING PROCESS.....	4-1
Section I – The Military Decision-Making Process	4-1
Receive The Mission / Mission Analysis.....	4-3
COA Development.....	4-13
Courses of Action Analysis (Wargame).....	4-16
COA Comparison.....	4-18
COA Approval	4-18
FSP / FASP Production	4-18
Summary.....	4-22
Section II – FA Intelligence Preparation of the Battlefield.....	4-25
Steps In FA IPB Process	4-25
Section III – FA Battalion Rehearsals	4-32
Rehearsal Principles	4-32
Rehearsal Types	4-32
Rehearsal Techniques	4-32
Scripting the Rehearsal.....	4-33
Conducting A Rehearsal.....	4-33
Scheduling Rehearsals	4-34
FA Battalion Rehearsals	4-36
Chapter 5 DELIVER FIRES.....	5-1
Section I – Fire Mission Processing	5-1
Fire Mission Requests	5-3
Tactical Fire Direction	5-4
Technical Fire Direction	5-7
Massed Fires	5-8
Continuity of Operations	5-8
Section I – FA Fire Missions	5-10
Improved Conventional Munitions (ICM)	5-10
Illumination.....	5-11
Smoke/White Phosphorous (WP)	5-12
SCATMINE	5-17
Copperhead	5-20
Danger Close	5-22
Section III – Counterfire.....	5-24
Responsibilities	5-24
Counterfire Considerations	5-26
Radar Management	5-28

Wargaming	5-31
Rehearsing Counterfire	5-33
Counterfire Drill.....	5-33
Theater Missile Defense.....	5-34
Section IV – Suppression of Enemy Air Defenses.....	5-36
Considerations.....	5-37
Section V – Meteorology.....	5-39
Joint/Combined Met Considerations	5-39
Basic Met Guidance	5-40
Chapter 6 MOVEMENT AND POSITIONING CONSIDERATIONS	6-1
Section I – Terrain Management	6-1
Position Coordination	6-2
Movement Coordination	6-3
Section II – Positioning.....	6-5
Position Area Selection Considerations	6-5
Types of Position Areas	6-5
Occupation of Built-Up Areas	6-9
Reconnaissance.....	6-10
Section III – Movement.....	6-12
Movement Techniques	6-12
Movement Considerations.....	6-17
Displacement Techniques	6-18
Movement Control Measures	6-19
Movement Planning.....	6-22
Section IV – Survey	6-26
Survey Planning Factors	6-27
Section V – Deployment	6-29
Deployment Readiness	6-29
Deployment	6-30
Chapter 7 COMBAT SERVICE SUPPORT	7-1
Section I – Organization and Functions.....	7-1
Section Responsibilities	7-2
FA Battalion CSS.....	7-4
FA Battalion Trains	7-6
Section II – Planning	7-14
CSS Planning Process	7-14
Planning for Changing Missions.....	7-16

Special CSS Planning Considerations.....	7-16
Section III – Logistical Support	7-18
Supply	7-18
Maintenance	7-30
Field Services	7-33
Section IV – Personnel and Health Services Support.....	7-35
Personnel and Administrative Services	7-35
Chaplain Activities.....	7-36
Health Services Support	7-37
Prisoners of War	7-39
Section V – Reconstitution	7-41
Reorganization.....	7-41
Regeneration	7-41
Weapon System Replacement Operations.....	7-41
Chapter 8 FA OPERATIONS	8-1
Section I – Common FA Considerations	8-1
Deploy/Conduct Maneuver	8-1
Develop Intelligence.....	8-1
Employ Fires	8-2
Perform Logistics and CSS.....	8-2
Exercise C2.....	8-3
Protect the Force	8-3
Section II – FA Support of Offensive Operations	8-4
Basic FA Tasks in the Offense	8-4
Forms of Maneuver.....	8-6
Movement to Contact/Search and Attack	8-9
Attacks	8-10
Exploitation	8-12
Pursuit	8-13
Reserves	8-14
Section III – FA Support of Defensive Operations.....	8-16
Organization of the Defensive Battlefield.....	8-16
Basic FA Tasks in the Defense.....	8-17
Mobile Defense	8-20
Area Defense	8-20
Retrograde Operations	8-21
Additional FA Considerations for Defensive Operations	8-21

Section IV – FA Support of Other Tactical Operations	8-23
Amphibious Operations	8-23
Air Assault Operations.....	8-25
Airborne Operations	8-26
Military Operations in Urban Terrain	8-28
Encircled Forces.....	8-31
Passage of Lines.....	8-32
Relief in Place.....	8-32
River Crossing Operations	8-33
Security Operations	8-34
Rear Area Operations	8-35
Linkup Operations	8-37
Breaching Operations.....	8-38
Artillery Raid Operations	8-38
Section V – FA Support of Stability Operations and Support Operations	8-42
Stability Operations	8-42
FA Support of Stability Operations.....	8-43
Support Operations	8-45
FA Support of Support Operations.....	8-46
Section VI – Climate and Terrain Considerations	8-48
Night Operations.....	8-48
Cold Weather Operations.....	8-50
Desert Operations	8-52
Jungle Operations	8-54
Mountain Operations	8-56
Appendix A FIELD ARTILLERY SUPPORT PLAN	A-1
Section I – Field Artillery Support Plan Format	A-1
FASP Outline.....	A-1
Survey Tab to the FASP	A-8
Automation Tab to the FASP	A-8
Target Acquisition Tab to the FASP	A-8
Artillery Intelligence Tab to the FASP.....	A-8
Administrative-Logistics Tab to the FASP	A-8
FA Support Matrix Tab to the FASP	A-9
Section II – Example Field Artillery Support Plan	A-11
FASP – Body (Example)	A-12
Example Field Artillery Support Matrix (Tab)	A-23
Example Positioning Overlay (Tab)	A-24

Example Target Acquisition Tab	A-25
Example Radar Deployment Order (Enclosure to Tab).....	A-28
Example Capabilities Overlay (Enclosure to Tab).....	A-29
Example Survey Plan.....	A-30
Appendix B MANUAL TARGETING AND FIRE PLANNING	B-1
Section I – Manual Target Data Processing	B-1
Recording Target Information	B-1
Recording Targeting Information (Graphics)	B-3
Battle Damage Assessment	B-6
Purging Targets	B-6
Section II – Manual Scheduling of Fires	B-8
Planning Fires	B-8
MLRS Fire Planning.....	B-18
Appendix C ENVIRONMENTAL AWARENESS	C-1
Section I – Army Environmental Awareness.....	C-1
General Policy Statements	C-1
Section II – FA Battalion Environmental Considerations	C-2
Field Activities	C-2
Munitions.....	C-3
Hazardous Material and Hazardous Waste.....	C-3
Maintenance	C-5
Supply	C-6
Spill Response	C-6
Section III – Regulatory Requirements	C-8
Laws and Regulations.....	C-8
Regulatory Training Requirements	C-9
Environmental Compliance Officer Responsibilities	C-10
Section IV – Environmental Risk Management.....	C-11
Environmental Risk Management.....	C-11
The Five-Step Process	C-11
Glossary	Glossary-1
Bibliography	Bibliography-1
Index	Index-1

Preface

This field manual (FM) provides tactics, techniques, and procedures (TTP) for the commander and staff in field artillery (FA) battalions. It is intended as a general “how to” manual to assist in force standardization with sufficient flexibility to adapt to local conditions as reflected in unit tactical standing operating procedures (TSOP).

The publication sets forth doctrine pertaining to organization, command and control (C2), operations, and TTP for the FA battalions. It establishes responsibilities and general duties of key personnel by focusing on how an FA battalion supports the full spectrum of military operations.

It keys the battalion commander and staff to areas that must receive training emphasis in order to provide effective FA support. The specifics of how to train are outlined in soldiers’ manuals and Army training and evaluation program (ARTEP) mission training plans (MTPs).

This manual applies to United States (US) Army and US Marine Corps (USMC) FA battalions assigned to the active, reserve, and National Guard (NG) forces. Unit organizations described in this publication reflect, in general overview, the L/A/F-series Department of the Army (DA) tables of organization and equipment (TOEs). Full consideration is given to recent and planned force structure changes and emerging technological opportunities – as of the date of publication.

The publication broadly describes how the FA battalion operates to support the combined arms team using available Field Artillery Tactical Data Systems (FATDS), and other automated C2 systems.

This FM addresses combat operations in support of both heavy and light maneuver forces, as well as stability operations and support operations and FA (support) operations in special environments. It is not a stand-alone document; but should be used in conjunction with maneuver and other FA doctrinal manuals.

The manual focuses on FA battalions performing the missions of direct support (DS) or general support (GS) to maneuver forces, as well as FA units providing reinforcing (R) or general support reinforcing (GSR) fires to other FA units in support of force operations.

This publication implements all applicable North Atlantic Treaty Organization (NATO) standardization agreements (STANAGs) (see the bibliography for a complete listing).

The proponent for this manual is the Commandant, US Army Field Artillery School. Submit changes for improving this publication on DA Form 2028 (Recommended Changes to Publications and Blank Forms). Please key your comments and recommendations to the page, paragraph, and line numbers to which they apply. If DA Form 2028 is not available, a letter is acceptable. Provide reasons for your comments to ensure complete understanding and proper evaluation.

Unless this publication states otherwise, masculine nouns or pronouns do not exclusively pertain to men.